SELECTIVELY MONITORING STORES TO SUPPORT TRANSACTIONAL PROGRAM EXECUTION

ABSTRACT

One embodiment of the present invention provides a system that selectively monitors store instructions to support transactional execution of a process, wherein changes made during the transactional execution are not committed to the architectural state of a processor until the transactional execution successfully completes. Upon encountering a store instruction during transactional execution of a block of instructions, the system determines whether the store instruction is a monitored store instruction or an unmonitored store instruction. If the store instruction is a monitored store instruction, the system performs the store operation, and store-marks a cache line associated with the store instruction to facilitate subsequent detection of an interfering data access to the cache line from another process. If the store instruction is an unmonitored store instruction, the system performs the store operation without store-marking the cache line.

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